

fluid when the processing vessel carries the processing fluid, the workpiece support further being configured to carry a first electrode;

 a support configured to carry a second electrode in fluid contact with the processing fluid when the processing vessel carries the processing fluid; and

 an auxiliary electrode support positioned to support an auxiliary electrode external to the processing space and in fluid communication with the processing space when the processing vessel carries the processing fluid.

36. (New) The apparatus of claim 35, further comprising the first electrode, and wherein the first electrode includes a cathode.

37. (New) The apparatus of claim 35, further comprising the second electrode, and wherein the second electrode includes an anode.

38. (New) The apparatus of claim 35, further comprising the auxiliary electrode, and wherein the auxiliary electrode is carried by the at least one wall.

39. (New) The apparatus of claim 35 wherein the at least one wall has a first surface facing inwardly toward the processing space and a second surface facing outwardly away from the processing space and wherein the auxiliary electrode support includes a portion of the second surface of the at least one wall.

40. (New) The apparatus of claim 35 wherein the at least one wall has a first surface facing inwardly toward the processing space and a second surface facing outwardly away from the processing space and wherein the auxiliary electrode support includes a portion of the second surface of the at least one wall, the portion having a groove positioned to carry the auxiliary electrode.

41. (New) The apparatus of claim 35, further comprising a processing fluid disposed in the processing space of the processing vessel.

42. [(New)] The apparatus of claim 35, further comprising:
an outlet conduit positioned to receive the processing fluid after the processing fluid exits the processing space; and
the auxiliary electrode, wherein the auxiliary electrode is disposed in the outlet conduit.

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Cont 43. [(New)] The apparatus of claim 35, further comprising a particulate filter disposed to filter residue from the processing fluid after the processing fluid exits the processing space.

44. [(New)] The apparatus of claim 35 wherein the at least one wall is a first wall and the processing vessel includes a first vessel having the first wall, and wherein the processing vessel further includes a second vessel having a second wall disposed outwardly from the first wall.

45. [(New)] The apparatus of claim 35 wherein the at least one wall is a first wall and the processing vessel includes a first vessel having the first wall, the first wall having an upper edge, and wherein the processing vessel further includes a second vessel having a second wall disposed outwardly from the first wall, and wherein the apparatus further comprises:

an exhaust gas conduit coupled to the second wall; and
an intermediate wall positioned between the first wall and the exhaust gas conduit, the intermediate wall projecting above the upper edge of the first wall.

46. [(New)] The apparatus of claim 35, further comprising a reservoir container, wherein the processing vessel is disposed at least partially in the reservoir container, the reservoir container being positioned to receive processing fluid exiting the processing space.

47. L (New) The apparatus of claim 46, further comprising the auxiliary electrode and wherein the auxiliary electrode is disposed in the reservoir container.

48. L (New) The apparatus of claim 35, further comprising:
the second electrode; and
a shield positioned adjacent to the second electrode to at least restrict exposure of the second electrode to the processing fluid.

49. L (New) The system of claim 49 wherein the electrode shield includes a dielectric material.

50. L (New) An apparatus for electrically processing a workpiece, comprising:

a processing vessel having at least one wall and defining a processing space, the processing space being configured to carry a processing fluid, the wall having an upper edge defining a weir over which the processing fluid can flow;

a workpiece support positioned at least proximate to the processing vessel, the workpiece support being configured to support a workpiece in contact with a processing fluid when the processing vessel carries the processing fluid, the workpiece support further being configured to carry a first electrode;

a support configured to carry a second electrode in fluid contact with the processing fluid when the processing vessel carries the processing fluid; and

an exhaust gas conduit positioned in fluid communication with the processing space, wherein a gas path between the weir and the exhaust gas conduit extends upwardly above the weir.

51. L (New) The apparatus of claim 50 wherein the at least one wall is a first wall and the processing vessel includes a first vessel having the first wall, and wherein the processing vessel further includes a second vessel having a second wall disposed outwardly from the first wall, and wherein the exhaust gas conduit is coupled to the second wall, and

wherein the apparatus further comprises an intermediate wall positioned between the first wall and the exhaust gas conduit, the intermediate wall projecting above the upper edge of the first wall.

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52. [(New)] The apparatus of claim 50 wherein the at least one wall has a first surface facing inwardly toward the processing space and a second surface facing outwardly away from the processing space, the second surface being configured to support an auxiliary electrode.

53. [(New)] The apparatus of claim 50 wherein the at least one wall has a first surface facing inwardly toward the processing space and a second surface facing outwardly away from the processing space, the second surface having a groove, and wherein the apparatus further comprises an auxiliary electrode carried in the groove of the second surface.

54. [(New)] A method for electrically processing a workpiece, comprising:
positioning the workpiece in a processing space of a processing vessel with the workpiece in contact with an electrically conductive processing fluid in the processing space;

contacting a first electrode with the workpiece;

contacting a second electrode with the processing fluid;

while the first electrode functions as a cathode and the second electrode functions as an anode, directing an electrical current between the first and second electrodes and through the processing fluid to electroplate a conductive material onto the workpiece and the first electrode;

providing a flow of the processing fluid from the processing space to an auxiliary electrode external to the processing space to form an electrically conductive path between the first electrode and the auxiliary electrode; and

while the auxiliary electrode functions as a cathode and the first electrode functions as an anode, directing an electrical current between the first electrode and the

auxiliary electrode to remove at least a portion of the conductive material electroplated onto the first electrode.

55. [(New)] The method of claim 54, further comprising passing the processing fluid containing removed plated deposits through a particulate filter.

A12 56. [(New)] The method of claim 54, further comprising passing the processing fluid containing removed plated deposits through a particulate filter and returning the filtered processing fluid to the processing space.